

## **REMARKS**

Applicant respectfully requests consideration of the subject application as amended herein. This Amendment is submitted in response to the Office Action mailed on August 12, 2005. Claims 1, 3-8, 10, 11, 13-26, 28-31, 33-40, 42 and 44 are rejected. No claims have been amended. No new matter has been added. No claims have been canceled. Therefore, claims 1, 3-8, 10-11, 13, 16, 19, 23-26, 31, 33-34, 36, 40, 42, and 44 are presented for examination.

### **Claim Rejections under 35 U.S.C. § 102(e)**

The Examiner rejected claims 1, 3-8, 10-11, 13, 16, 19, 23-26, 31, 33-34, 36, 40, 42, and 44 as being anticipated by Bugnion et al, (U.S. Patent No. 6,496,847, hereinafter “Bugnion”). Applicant does not admit that Bugnion is prior art and reserves the right to swear behind the reference at a later date. Regardless, Applicant respectfully submits that claims 1, 3-8, 10-11, 13, 16, 19, 23-26, 31, 33-34, 36, 40, 42, and 44 are not anticipated by Bugnion.

The invention of Bugnion discloses a host operating system 340 and a virtual machine monitor 360 existing in parallel at a system level on a hardware 110. (Bugnion, col. 7, lines 13-17, FIG. 3). Bugnion further discloses a device emulator 300 that runs on top of the host operating system 340. (Bugnion, col. 7, lines 13-17, FIG. 3). “A driver, which is downloaded into or otherwise installed or included in the host operating system,” interfaces with the device emulator. (Bugnion, col. 9, lines 1-7).

The driver discussed in Bugnion is not a driver of a soft device. In fact, Bugnion does not teach or suggest the use of soft devices.

Claims 1, 3-8, 10 and 40

Bugnion does not teach or suggest the use of soft devices. The devices disclosed in Bugnion are physical system devices. (Bugnion, col. 5, lines 15-16). In contrast, the presently claimed invention refers to “a driver of a soft device” implemented in a “virtual machine monitor.”

Examples of soft devices are illustrated in the background section of this application. For example, a host-based soft device may be a hardware device that includes a host software component and a reduced functionality hardware component, such that the host software component replaces portions of a fixed function device in a personal computing system. (background section, p. 1, par. 1).

Bugnion does not teach or suggest the use of soft devices. Much less does Bugnion teach or suggest implementing a driver of a soft device in a virtual machine monitor. Thus, Bugnion does not teach or suggest the limitations included in the following language of claim 1, which recites:

A method for constructing a soft device, the method-comprising:  
implementing a driver of the soft device in a virtual machine monitor; and  
making the soft device available for use by one or more virtual machines  
coupled to the virtual machine monitor.

Similar language is also included in independent claims 8 and 40. Accordingly, independent claims 1, 8 and 40 are not anticipated by Bugnion. Claims 3-7 depend from and further limit claim 1, and claim 10 depends from and further limits claim 8. Therefore, applicant respectfully asserts that claims 1, 3-8, 10 and 40 are in condition for allowance, and requests that the Examiner remove his rejections under 35 U.S.C. § 102(e).

Claims 11, 13, 16, 19, 23-26, 28, 31, 33-34, 36, 42 and 44

Bugnion does not teach or suggest the use of soft devices. The devices disclosed in Bugnion are physical system devices (Bugnion, col. 5, lines 15-16). In contrast, the presently claimed invention refers to “a software component of a soft device” implemented in a “virtual machine.”

Examples of soft devices are illustrated in the background section of this application. For example, a host-based soft device may be a hardware device that includes a host software component and a reduced functionality hardware component, such that the host software component replaces portions of a fixed function device in a personal computing system. (background section, p. 1, par. 1).

Bugnion does not teach or suggest the use of soft devices, much less implementation of a software component of a soft device in a virtual machine monitor. Thus, Bugnion does not teach or suggest the limitations included in the following language of claim 11, which recites:

A method for constructing a soft device, the method comprising:  
implementing a software component of the soft device in a first virtual machine; and  
making the soft device available for use by a second virtual machine.

Similar language is also included in independent claims 26, 31, 42 and 44. Accordingly, independent claims 11, 26, 31, 42 and 44 are not anticipated by Bugnion. Claims 13, 16, 19 and 23-25 depend from and further limit claim 11, claim 28 depends from and further limits claim 26, and claims 33-34 and 36 depend from and further limit claim 31. Therefore, applicant respectfully asserts that claims 11, 13, 16, 19, 23-26, 28, 31, 33-34, 36, 42 and 44 are in condition for allowance, and requests that the Examiner remove his

rejections under 35 U.S.C. § 102(e).

**Claim Rejections under 35 U.S.C. § 103(a)**

The Examiner rejected claims 14-15, 17-18, 20-22, 29-30, 35 and 37-39 as being unpatentable under 35 U.S.C. § 103(a) over Bugnion in view of Lim, et al., (U.S. Patent No. 6,795,966, hereinafter “Lim”). Applicant does not admit that Lim is prior art and reserves the right to swear behind the reference at a later date. Regardless, Applicant respectfully submits that Bugnion and Lim, either individually or in combination, do not teach or suggest each and every limitation of the rejected claims.

Lim discloses a virtual machine resident on a virtual machine monitor. (Lim, col. 6, lines 23-29). The virtual machine has a virtual processor, a virtual memory, a virtual operating system, and at least one virtual peripheral device. (Lim, col. 6, lines 30-39). The virtual peripheral device is the virtualization of a physical device, such as a keyboard or a hard drive. The virtual peripheral device disclosed in Lim is not a software implementation of a soft device. In fact, Lim does not teach or suggest the use of soft devices, much less implementation of a software component of a soft device in a virtual machine, as claimed in claims 11, 26 and 31.

Thus, neither Bugnion or Lim, alone or in combination, teach or suggest the limitations included in the following language of claim 11, which recites:

A method for constructing a soft device, the method comprising:  
implementing a software component of the soft device in a first virtual machine; and  
making the soft device available for use by a second virtual machine.

Similar language is also included in independent claims 26 and 31. Accordingly,

independent claims 11, 26 and 31 are not anticipated by Bugnion or Lim, alone or in combination. Claims 14-15, 17-18, and 20-22 depend from and further limit independent claim 11, claims 29-30 depend from and further limit independent claim 26, and claims 35 and 37-39 depend from and further limit independent claim 31. Therefore, applicant respectfully asserts that claims 14-15, 17-18, 20-22, 29-30, 35 and 37-39 are in condition for allowance, and requests that the Examiner remove his rejections under 35 U.S.C. § 103(a).

### **Conclusion**

Accordingly, Applicant respectfully requests the withdrawal of the rejections and submits that pending claims 1, 3-8, 10, 11, 13-26, 28-31, 33-40, 42 and 44 are in condition for allowance. Applicant respectfully requests reconsideration of the application and allowance of the pending claims.

If the Examiner determines the prompt allowance of these claims could be facilitated by a telephone conference, the Examiner is invited to contact Marina Portnova at (408) 720-8300.

**Deposit Account Authorization**

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due. Furthermore, if an extension is required, then Applicant hereby requests such extension.

Respectfully submitted,

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